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the Langevin product line of

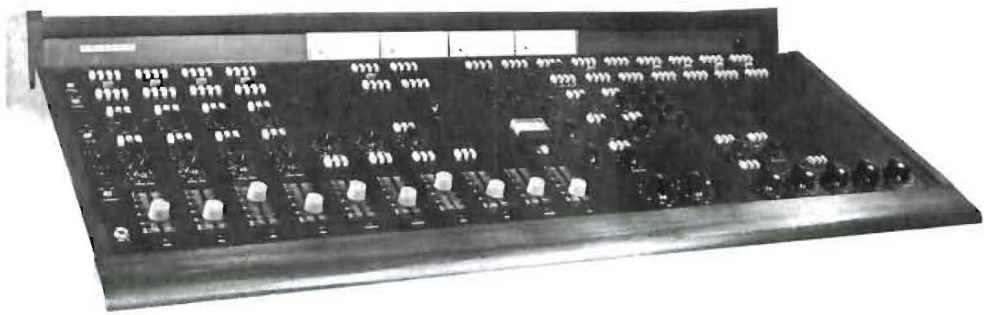
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CATEGORY  
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# CONSOLE MIXER SYSTEM AM - 4A



The functional, low-silhouette, design of the AM-4A Console Mixer System equips the operator with a convenient sloping work panel. Its over-all height is 7 inches and the depth is a compact 27 inches. Housings for the AM-4A Console Mixer System are stocked by Langevin in two widths, achieving maximum flexibility according to the number of modules desired. The AH21/13 Housing will accept 13 modules and is 32 inches wide. The AH21/19 Housing will accept 19 modules and is 45 inches wide. It is possible to mechanically join two AH21/13 Housings together for those installations demanding more than 19 modules.

Pre-wired circuitry and a solid-state power supply within the AM-4A Console Mixer System provide the necessary interconnections and power requirements for any module combination. Two, three, and four output channel versions are readily available from Langevin stock.

Input and output lines may be permanently connected to solder-lug boards within the console housing; or as an option, XL-type connectors may be installed in holes provided in the rear of the housing.

## AM - 4A CONSOLE COMPONENTS



### AM-401AS

A microphone preamplifier with straight line mixer, equalization and reverberation facilities. Includes output assignment switch and input attenuator.

### AM-401A

Exactly like the AM-401AS, but employing rotary mixer and overload indicator light.



### AM-421A

Rotary mixer preamplifier, with equalization, reverberation, input attenuator, solo and output assignment facilities. Three-position pushbutton located immediately above the rotary mixer, allows signal assignment to either "Off", "Program" or "Q".

#### NOTE

It is possible, on special order, to have the Q Circuit wired as an audition circuit. The AM-421A is **not** available with a straight line mixer.



### AM-411AS

Standard microphone preamplifier, similar to AM-401AS, but providing pan pot instead of solo pushbutton. Output assignment switch is rewired and marked for the following functions:

- Pos. 1 Output assigned to Channel 1.
- Pos. 2 Output assigned to Channel 2.
- Pos. 3 Output assigned through pan pot to Channel 3 and 4.
- Pos. 4 Output assigned to Q-Buss.

All four systems may be down at the same time, facilitating a microphone feed to Channels 1, 2, 3, and 4. The pushbutton in position #4 is electrically interlocked to disconnect the output of the preamplifier from the Buss system and applies its signal to the Q-Buss only.

### AM-411A

Identical to AM-411AS, but with straight line mixer.



### AM-431AS

Microphone preamplifier with straight line mixer, reverberation, input attenuator, solo and output assignment switch.

### AM-431A

Identical to the AM-431AS, but with rotary mixer and overload indicator light.

## AM - 4A CONSOLE COMPONENTS



### AM-441AS

Microphone preamplifier with straight line mixer, program equalizer, input attenuator, solo pushbutton, and output assignment switching. May be used in any preamplifier position, regardless of the original preamplifier used.

### AM-441A

Same as the AM-441AS, employing rotary mixer instead of straight line mixer.



### AM-471AS

Microphone preamplifier with straight line mixer, OFF-PROGRAM-Q switch, reverberation facilities, input attenuator, solo pushbutton, and output assignment facilities.

### AM-471A

Same as the AM-471AS, employing rotary mixer instead of straight line.



### AM-451AS

Microphone preamplifier with straight line mixer, input attenuator, solo pushbutton and output assignment switch.

### AM-451

Same as the AM-451AS, employing rotary mixer instead of straight line, and overload indicator light.



### AM-491AS

Microphone preamplifier employing straight line mixer, OFF-PROGRAM-Q switch, equalization facilities, input attenuator, solo pushbutton, and output assignment facilities.

### AM-491A

Same as the AM-491AS, employing rotary mixer instead of straight line mixer.



### AM-461AS

Microphone preamplifier employing straight line mixer, OFF-PROGRAM-Q switch, input attenuator, solo pushbutton, and output assignment switching.

### AM-461A

Same as the AM-461AS, employing rotary mixer instead of straight line.



### AM-407AS

Line amplifier with nominal program output of +4 dB; the maximum output; +22 dB. Amplifier has transformer coupled input and output and is provided with straight line sub-master control and reverberation-receive circuit. Reverb circuit has rotary level control and three-position, interlocked pushbutton switch. In the first position, it is possible to disable the reverb receive circuit; in the second position, to feed the reverb signal to the monitor circuit only; or, in the third position, to feed the reverb signal to the monitor and program channels simultaneously.

#### NOTE:

A small feedback amplifier is provided as a booster for the reverberation-send line. The AM-407AS has a fixed gain, thus requires no control. If applicable, the board's master control is connected to the AM-407AS amplifier circuit and performs in conjunction with the sub-master control, which is located in the module's front panel.



AM - 4A CONSOLE COMPONENTS



**AM-407A**  
Same as AM-407AS, employing rotary sub-master, instead of straight line mixer.

**AM-407AM**  
Same as AM-407A, with addition of output meter with VU scale mounted immediately above reverberation controls. This meter is connected across the output of the line amplifier and may be used in lieu of the large scale VU meters, which are located on the meter panel.

**AM-407ASM**  
Same as AM-407AM, employing straight line sub-master instead of rotary mixer.

**AM-427AS**  
Same as AM-407AS, without reverberation-receive facilities.

**NOTE:**

The reverberation-send amplifier, described for the AM-407A, is provided to facilitate special mixing devices that are fed from a separate output of the line amplifier. This is because the low frequency response of the reverb-send amplifier is limited to response above 150 Hertz.



**AM-419A**  
Booster amplifier providing fixed gain of 24 dB for four-channel operation. Primarily intended as booster stage to provide balanced +4 dB monitor output of AM-407-type amplifier. Since amplifier has a fixed gain, no controls are required.

**AM-419AC**  
Same as AM-419A, providing four rotary level controls on the front panel for individual channel level control when this booster amplifier is used in the monitor circuit.

**AM-419AM**  
Same as AM-419A, providing four output indicating meters. Primarily intended as reverberation-send booster in situations in which the operator might desire to monitor send level.



**AM-457AS**  
Line amplifier primarily intended to be used as scale-channel booster in conjunction with low-level signals, such as the output of Q-buss or MG-71 combining network. Provided with straight line mixer, output indicating meter, and output switch.

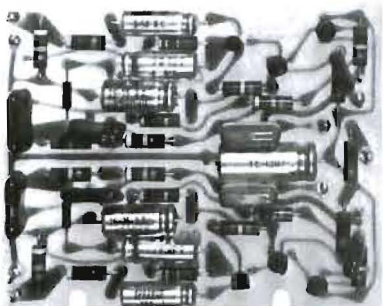
**AM-457A**  
Same as AM-457AS, providing rotary mixer instead of the straight line device.



COMBINING AMPLIFIERS

**AM-429BS**  
Amplifier with 4-to-1 combining network primarily for use as monophonic feed from the four-channel output of console. Provided with rotary mixer for each input channel and four-position pushbutton switch, allowing for the selection of feed points. Straight-line level control, as well as output indicating meter, is provided.

**AM-429B**  
Same as AM-429BS, providing rotary output level control instead of the straight line mixer.



**AM-409B**  
RIAA equalized preamplifier that operates directly off standard stereophonic phono cartridge. Does not require a module space, but rather is mounted in rear of the console housing in place of terminal board.

**NOTE:**

Output of AM-409B is designed to operate into line input of AM-401-type preamplifier. Other preamplifiers of the same series may be used if reverberation and additional equalization facilities are not required.



**MG-71**  
Passive 8-to-1 combining network with eight individual input level controls, and two groups of four pushbuttons that allow selection of input sources.

**NOTE:**

This module is designed to operate with a nominal input level of +4 dB, and has an insertion loss of 40 dB. It must be followed by an AM-457-type booster amplifier, or any device with similar gain characteristics, in order to recover the insertion loss of the combining module.

AM - 4A CONSOLE COMPONENTS



**AM-439A**  
Modular passive device containing four specially designed pan pots, primarily intended for stereophonic two-channel operation. Pan pots may derive signals from each of four output busses and allow application of outputs to any stereo-output line at any level desired.

**AM-449AS**  
Passive input module designed primarily for broadcast applications. Will accept two groups of stereophonic input pairs at nominal level of +4 dB. Provided with four bridging input transformers and input selector switch. Includes dual straight-line mixer and OFF-AUDITION-Q switch.

**NOTE:**  
Two groups of four pushbuttons each are provided to assign each of the two output channels to any combination of four program busses. This module contains no equalization or reverberation facilities since it is primarily used in conjunction with tape or disc playback facilities.



MULTI-CHANNEL CONTROLS

**MG-61-2**  
Passive board master control module that is designed to control output level of two AM-407-type line amplifiers on one control.

**MG-61-3**  
Same as the MG-61-2 except that it permits three-channel operation.

**MG-61-4**  
Same as the MG-61-2 except that it permits four-channel operation.

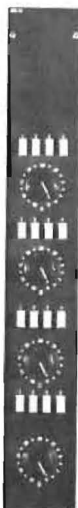
**MG-81**  
Passive control module with four rotary potentiometers. Primarily intended to be used in conjunction with AM-419AC booster amplifier in situations requiring separate monitor level controls for control room and studio operations.



MISCELLANEOUS ACCESORIES

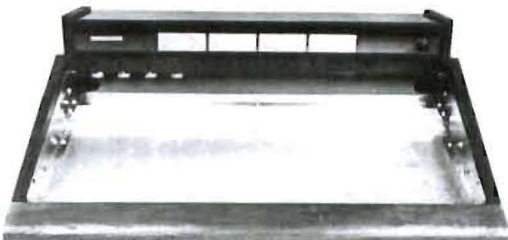
**MG-41**  
Essentially a crossbar-switch module with 4 by 4 arrangement. Will accept four input channels, each with a nominal operating level of +4 dB, and will allow the assignment of any input channel to any one of four output channels. The outputs are provided with a bridge-type level control.

**MG-91**  
Pre-wired terminal board to utilize any two AM-4000 series preamplifiers. Amplifier Cards extra.



**AH-21/19**  
AM-4A housing, 19 modules/4 input selector switches

**AH-21/13**  
AM-4A housing, 13 modules/4 input selector switches



MONITOR CONTROLS



CATALOG NO.	DESCRIPTION
RMX-111	1-gang ladder (600 Ohms)
RMX-1112	2-gang ladder (600 Ohms)
RMX-1113	4-gang ladder (600 Ohms)
RMX-1114	1-gang bridged "T" (600 Ohms)
RMX-1115	2-gang bridged "T" (600 Ohms)
RMX-1116	4-gang bridged "T" (600 Ohms)
RMX-1117	3-gang ladder (600 Ohms)
RMX-1118	3-gang bridged "T" (600 Ohms)
RMX-2018	8-gang ladder master
RMX-6181	1-gang (installed) 10K pot
RMX-6182	2-gang (installed) 10K pot
RMX-6183	3-gang (installed) 10K pot
RMX-6184	4-gang (installed) 10K pot

**NOTE:** Langevin's standard color for AM-4A consoles and modules is matte black with various colors of pushbutton knobs. If replacements or additions to existing consoles are ordered, please specify color desired. Console housing price includes all basic wiring to an agreed customer specification. We recommend having blank module spaces pre-wired to some eventual requirement at no extra charge. The price of meters, switches, various controls, and common connectors includes the wiring into the console and final inspection and testing.

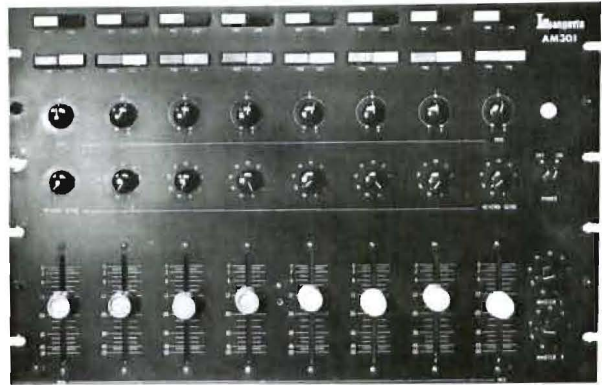


## PORTABLE MIXER SYSTEM AM - 3A



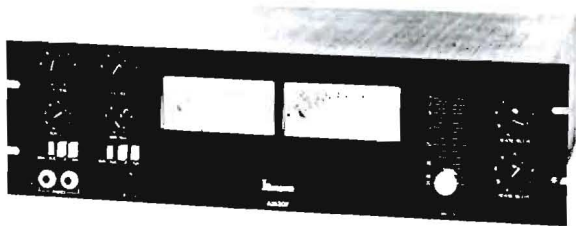
### AM-3A MIXER CONSOLE

A portable console designed for van or remote stereo sound recording and radio broadcasting. An eight-microphone, two-channel mixer that will accept 16 inputs, 8 of which may be used simultaneously. Permits recording two channels, mixing eight down to two, complete with equalizers, reverberation circuits, pan pots, and cueing circuits. Has an output system connected to provide cue and headphone monitoring, connection to telephone lines, and VU meters. Power for console provided with Langevin PS-4800B Power Supply (see page 15) that supplies power at 45 Vdc to the AM-301AS Mixer System and the AM-307AS Output System, which, along with the EQ-308 Equalizer panel comprise the AM-3A Mixer Console.



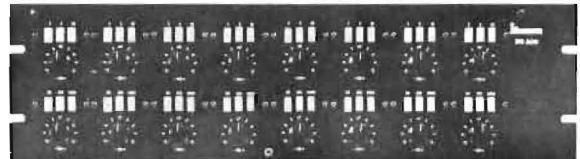
### AM-301AS MIXER SYSTEM

The heart of AM-3A Mixer Console. Each of eight regular input channels is provided with input selector pushbutton to apply one of two inputs to appropriate preamplifier. Line input provided with 60-dB pad for accepting normal +4 dB program line. Separate outputs are provided for reverberation channel and cue buss, which are broadband and may be used as additional program channels. Four additional external inputs are also provided: two into the program buss and two into the master gain controls.



### AM-307AS OUTPUT SYSTEM

Part of the AM-3A Mixer Console, providing selectable, multi-channel monitoring up to 10 watts for speaker or headphone monitoring. May extend the output of the two +4 dB low-impedance sources to +40 dB outputs, using various AM-4700 series output-card options. Output of each channel (left and right) is monitored with VU meter and applied to appropriate output connector.



### EQ-308A EQUALIZER

The third major part of the AM-3A Mixer Console, providing eight channels of equalization, each one assigned to one of eight input channels of AM-301AS. Two sets of pushbuttons are provided, one set for peaking low frequency equalizer at 50, 100, or 1000 Hertz; and one set for peaking high frequency equalizer at 3, 5, or 10 kilohertz. Additionally, two switches are provided for increasing or decreasing the equalization on each channel. Since the EQ-308A circuitry forms part of the AM-301AS Mixer System preamplifier feedback loop, no input power is required. (An optional four-channel equalizer, EQ-304A, may be used instead of the eight-channel EQ-308A. The EQ-304A is identical to the EQ-308A, except for the reduced number of channels.)

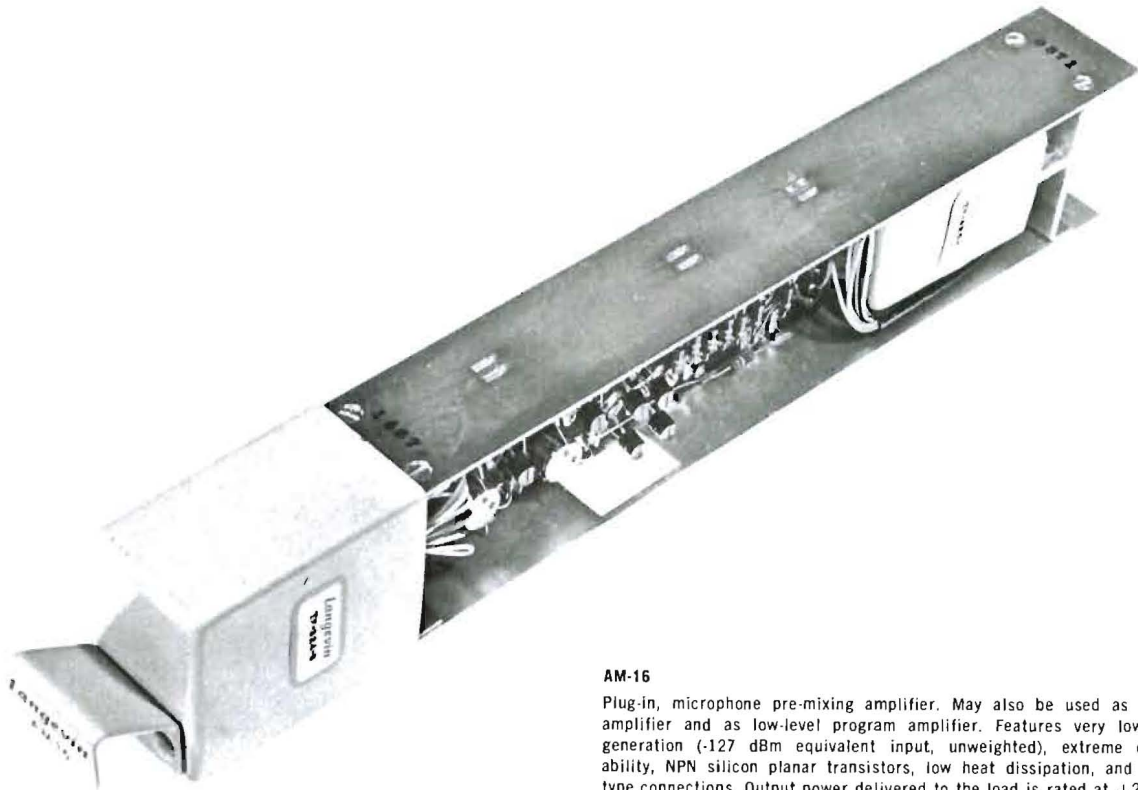
## BC - 8A STEREO AUDIO CONTROL CONSOLE



Stereo Audio Control Console featuring FM Stereo broadcasting, with or without AM transmitters. The moderately sized console has 8 full-stereo mixing channels; left and right stereo output channels; an optional separate monaural output channel; a stereo audition output; two stereo monitor outputs with muting and on-the-air lamp relays; a cueing amplifier; a talk-back switch; stereo headphones; and two power supplies, either of which is capable of handling the power requirements of the console.

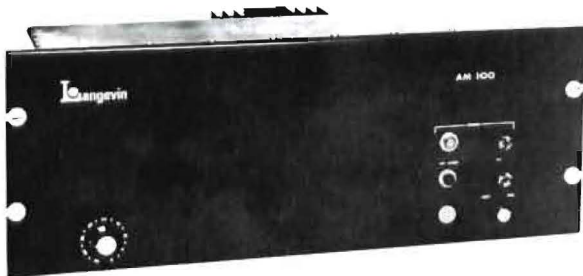


## AMPLIFIERS



### AM-16

Plug-in, microphone pre-mixing amplifier. May also be used as booster amplifier and as low-level program amplifier. Features very low noise generation (-127 dBm equivalent input, unweighted), extreme dependability, NPN silicon planar transistors, low heat dissipation, and plug-in type connections. Output power delivered to the load is rated at +24 dBm, which may be reduced to +18 dBm by the omission of strap connection.



### AM-100

100-Watt power amplifier suitable for control-room monitoring and for sound reinforcement applications. The AM-100 can also be used for continuous sinewave amplification. Two models of the AM-100 Power Amplifier are available; both are designed to drive loads of 4 Ohms, 8 Ohms, and 16 Ohms or 25- and 70-volt distribution lines. Model AM-100AT includes an input transformer that provides dc decoupling and is designed to accept an audio signal by bridging or matching a 600-Ohm input line. Model AM-100A comes without the input transformer.



### AM-7A

A high quality gain reduction and peak-limiting device for use with speech or music inputs. It may limit only, or limit in combination with compression. Attack time is adjustable from 10 USEC to 1.5 MSEC. Release time is adjustable from 25 MSEC to 6 sec, when switched to manual position. When in automatic position, the control sets the shortest release time, but the gate increases the time as needed to reduce distortion. Maximum output to +30 dBm, frequency response 30Hz to 20 KHz  $\pm 1$  dB. Distortion 0.5% maximum. Output noise level below -70 dB. Compression Slopes 30:1, 40:20, 30:15 and 20:10.

STRAIGHT-LINE ATTENUATORS AND MIXERS

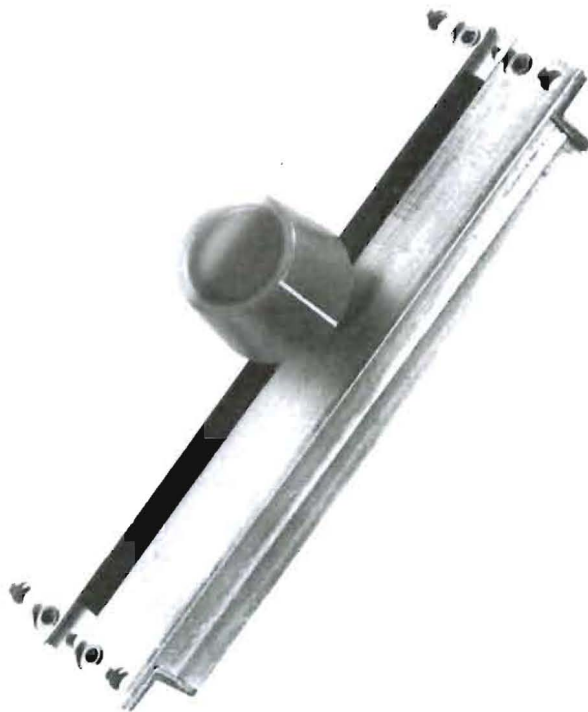


CIRCUIT TYPES AND PHYSICAL CHARACTERISTICS

CAT. NO.	CIRCUIT TYPE	STEPS	DB/STEP
SMX-500(*)	Unbalanced Ladder	Infinite	Infinite

(\*) Straight line mixers marked with an asterisk are available with cue at the Off position, but only up to 4-gang.

600 Ohm ladder control featuring conductive plastic element with attendant, infinite resolution, uniform impedance, quiet circuit operation, long life, and extended operating periods between cleanings. Available in several configurations, and up to 4 circuits (4-gang) in the same small package (see dimensioned illustration). The available configurations are listed in the table, and include: attenuator only, attenuator with cue position (with mechanical stop and release lever), and attenuator with "start" switch (no mechanical cue stop). Each of these three configurations is available with or without lamps for back-lighted panel engraving. In the "cue" position, the single- and two-circuit audio inputs are transferred to external "cue" circuits; in the three- and four-circuit attenuators in the "cue" positions, a single switch circuit (isolated from the audio circuits) is closed to enable actuation of an external relay (not furnished). In all of the "start" switch configurations, a pair of switch contacts (isolated from the audio circuits) close upon movement of the attenuator knob away from the "off" position (oo atten). Other switch actions are available upon special order, limited to two SPDT switches. Connections are made to the attenuators through double row 6 pin or double row 10 pin P.C. board type edge connectors as indicated in the table, on standard .156 spacing.



The Langevin SMX-1000 series Straight Line Mixers represent the latest state-of-the-art potentiometers in which conductive plastic elements are used to provide stepless, continuously variable, resistive mixers. The conductive plastic elements are constructed with a modified logarithmic audio taper. These new mixers provide the best in extremely low-noise, long-life operation and are used to blend up to 2-watt audio signals during recording and re-recording sessions, public address applications, and radio and TV broadcasting.

SPECIFICATIONS

Resistance	10,000 ohms, $\pm 10\%$ (Standard) 600 to 100,000 ohms available on special orders.
Linear Travel	Approximately 2 3/4 inches
Functions	Audio log taper potentiometer (20 dB attenuation at first 50% of travel)
Output Smoothness	1 percent maximum
Dielectric Strength	900V rms
Power Rating	2 watts at 40°C

ADDITIONAL ACCESSORY INFORMATION

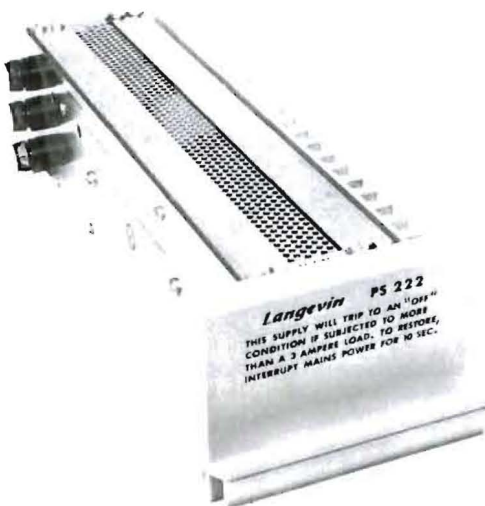
Escutcheons are not supplied with Langevin Straight Line Mixer Controls and must be ordered separately. Escutcheons are available in 3/8" aluminum black anodized and engraved being either 1 1/4" or 1 1/2" in width by 7" in length, or for back lighted versions a 3/4" thick escutcheon with a black phenolic lamination on the front surface can be provided. All straight line units are supplied with a standard red knob, part number K-1050, size: 3/4" diameter by 1/2" high. A variety of solid color molded knobs are also available.

## POWER SUPPLIES



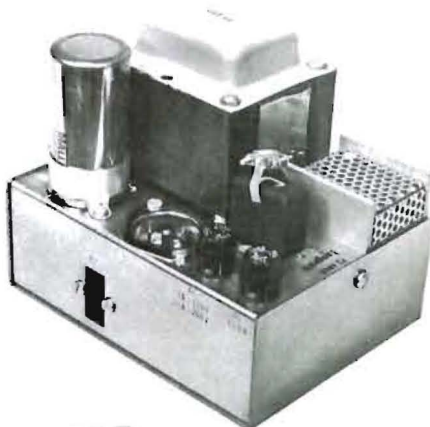
### PS-221

Plug-in, 24-Volt, 10-Ampere power supply. A solid state, regulated unit primarily intended to supply power to transistor-type audio amplifiers. Full-load ripple output less than 1 mV/RMS. May be operated on either 105-125 Volts or 210-250 Volts at 50 to 400 Hz.



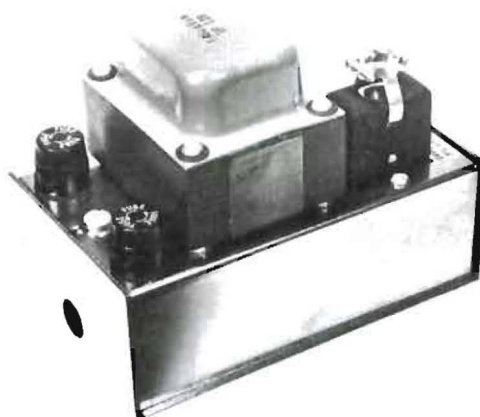
### PS-222

Plug-in, 24-Volt, 3-Ampere power supply. A solid state, regulated unit primarily intended to supply power to transistor-type amplifiers. Full-load ripple output less than 1 mV/RMS. May be operated on either 105-125 Volts or 210-250 Volts at 50 to 400 Hz.



### PS-4800A/B

1-Ampere, 45-Volt, frame-mounted power supply. The "A" model for use with AM-4A Console Mixer System and designed to drive up to 14 AM-401 Preamplifiers and up to 4 AM-407 Line Amplifiers, or any other load requiring up to 1-Ampere dc at 45 Volts. The "B" model for use with the AM-3A Portable Mixer System and designed to drive the AM-301AS Mixer and the AM-307AS Output Systems, which are integral parts of the AM-3A. The basic PS-4800 Power Supply is a solid state, regulated unit whose full-load ripple output is less than 1 mV/RMS and may be operated on either 105-125 Volts or 210-250 Volts at 50/60 Hz. Its dimensions are 6" wide by 4 1/2" deep by 5" high, and weighs approximately 8 pounds (shipping weight).



### PS-4900B

0.25-Ampere, 45-Volt, frame mounted power supply for use with AM-1A Mixer-Amplifier. A solid-state, regulated unit whose full-load ripple output is less than 1 mV/RMS and may be operated on 105 to 125 Volts at from 50 to 400 Hz. Dimensions are 3 1/8" wide by 5 3/8" deep by 4 1/8" high, and weighs approximately 8 pounds (shipping weight).

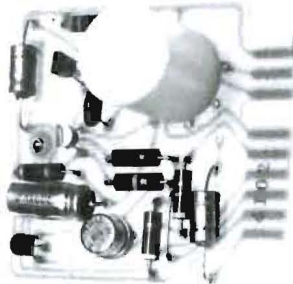


## 4000 SERIES MODULAR LINE • SOUND REINFORCING EQUIPMENT



### AM-4101 A/B

Low impedance microphone preamplifier with choice of input transformers. When operated from source impedance of 250 Ohms, a  $-54$  dBm input signal will cause 250-mV output into a system load of 100K. Model A uses TF-407 input transformer. Model B uses TF-434 input transformer which improves low-frequency response and reduces distortion.

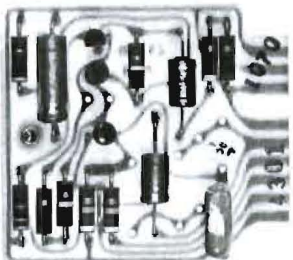


### AM-4102 A/B

Low impedance preamplifier with AM-4101 design characteristics. Operates into system load of 10K. Model A uses TF-407 input transformer; Model B uses TF-434.

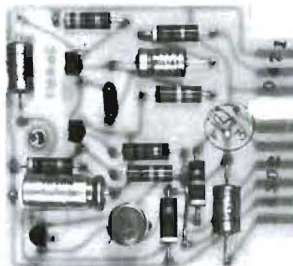
### AM-4103 A/B

Low impedance preamplifier, same as the AM-4101, except it is designed to operate into a system load of 600 Ohms. Model A uses TF-407 input transformer; Model B uses TF-434.



### AM-4301A

High impedance microphone preamplifier with RC input coupling. When operated from a source impedance of 100K,  $-33$  dBm input signal will cause 250-mV output into system load of 100K.



### AM-4302 A

Same as the AM-4301 except that it operates into a system load of 10K.

### AM-4303 A

The AM-4301 designed for operation into a system load of 600 Ohms.

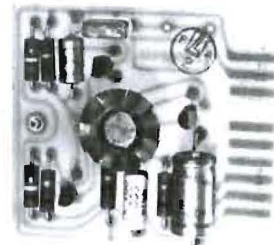


### AM-4500A

Preamplifier with phonograph input and RIAA equalization for magnetic cartridges. Designed as companion unit for AM-1A/AM-2A Mixer System. When operated from source impedance of 47K, 5-mV/1-kHz signal will cause 160-mV output into a system load of 100K. The source impedance may be changed by substituting other input load resistors for different cartridges.

### AM-4502A

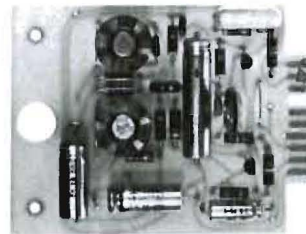
Similar to the AM-4500A preamplifier, except designed to be companion unit for the AM-3A Portable Mixer Console. When operated from source impedance of 47K, a 5-mV/1-kHz signal will cause 580-mV output into system load of 10K.



### AM-4700B/C/D

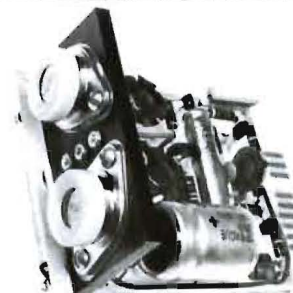
Line amplifier primarily intended for use as program line driver. Designed to drive 600-Ohm load to a maximum program level of  $+18$  dBm. Output circuit provides a single-ended source. 1:1 repeat coil, such as Langevin's TF-392, required to provide balanced source for various loads. Source impedance should be approximately 250K.

The only difference between the three models (B, C, and D) is the relative gain of the amplifier. For a  $+4$  dBm output into a 600-Ohm load, the "B" model requires a 40-mV input signal; the "C" model requires 20-mV input; and the "D" model requires 10-mV input.



### AM-4701

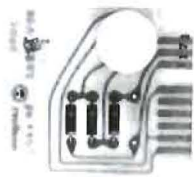
Line amplifier designed to drive 150-Ohm load to maximum program level of 1 Watt ( $+30$  dB). When operated from source impedance of 50K, 215-mV signal will cause 1-Watt output into system load of 150 Ohms.



### AM-4710

Power amplifier designed to drive 8-Ohm load to maximum program power level of 10 watts ( $+40$  dB). When operated from source impedance of 50K, 200-mV signal will cause 10-watt output into system load of 8 Ohms.

# 4000 SERIES MODULAR LINE SOUND REINFORCING EQUIPMENT



**BR-4402**  
Bridging input card, to match or bridge a high-level audio line.



**EQ-4008**  
Tone control mounted on bracket.



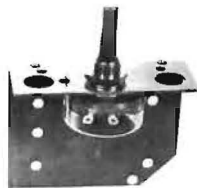
**BR-4403A**  
Bridging input card same as BR-4402 with better response.



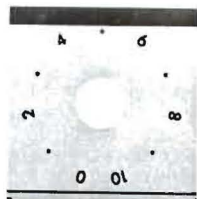
**MG-4001**  
RIAA modification group.



**BKT-4000**  
Mounting bracket, for TRY-4000.



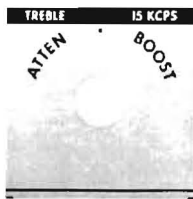
**MG-4007**  
Gain control with mounting.



**E-4661**  
Escutcheon.



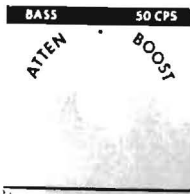
**PS-4900**  
0.25, 44V frame-mounted power supply for AM-1A.



**E-4671**  
Escutcheon.



**SC-4401**  
Strapping card, for high impedance input.



**E-4672**  
Escutcheon.



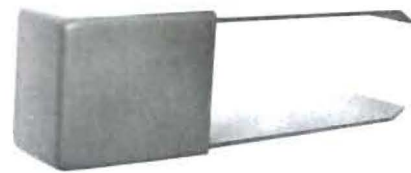
**TRY-4000**  
Tray for use with 4000-series amplifiers.

## RACK-MOUNTED ACCESSORIES



**TRY-6**

A tray used to mount the AM-16 Microphone Amplifier. Finish is gold iridite. Its approximate size is 9¾ inches deep by 1½ inches wide by 2 inches high, and weighs approximately 1 pound (shipping weight).



**AB-16**

Apparatus blank using space of one AM-16 microphone amplifier in RC-612 rack cabinet when full number of amplifiers is not installed. Finish is Langevin light gray baked-on enamel. Its approximate shipping weight is ¾ pound.



**TRY-7**

A tray used to mount the PS-222 Power Supply. Finish is gold iridite. Its approximate size is 12⅞ inches deep by 2¾ inches wide by 3⅞ inches high, and weighs approximately 1½ pounds (shipping weight).



**TRY-23**

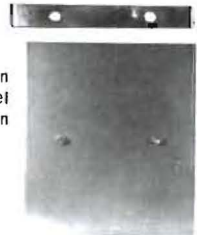
A tray used to mount PS-221 Power Supply. Finish is gold iridite. Its approximate size is 15 inches deep by 6¼ inches wide by 1⅞ inches high, and weighs approximately 6 pounds (shipping weight).



**RC-16**

A rack cabinet that mounts 12 AM-16 Microphone Amplifiers. Has integral trays and includes plug receptacles. Finish is gold iridite, except exposed surfaces, which are Langevin light gray baked-on enamel. Its size is 11 inches deep by 19 inches wide (including mounting brackets) by 3½ inches high, and weighs approximately 8 pounds (shipping weight).

## APPARATUS BLANKS



**AB-17**

AB-17 is used to cover one empty space in an RC-76 Rack Cabinet. The AB-17 fits over mat panel MP-76. Finish is Langevin dark gray baked-on enamel.



**AB-23**

AB-23 is used to cover empty space in an MF-23 Mounting Frame. The AB-23 fits over mat panel MP-23. Finish is Langevin dark gray baked-on enamel. The approximate shipping weight of either the AB-17 or AB-23 is 1 pound.



**MP-35A**

Mat panel used to cover rack-installed, rear-access TRY-23 Tray. Finish is Langevin dark gray baked-on enamel. Its size is approximately 19 inches wide by 8¾ inches high, and weighs approximately 3½ pounds (shipping weight).



## MAT PANELS & MOUNTING FRAMES

**MP-23, MP-76**

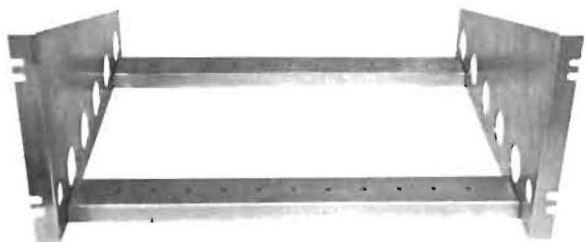
MP-23 covers front of MF-23 Mounting Frame. Its approximate size is 19 inches wide by 8¾ inches high.

MP-76 covers front of RC-76 Rack Cabinet. Its approximate size is 19 inches wide by 5¼ inches high.

Both MP-23 and MP-76 Mat Panels are finished with Langevin dark gray baked-on enamel, and weigh approximately 5 pounds (shipping weight).



## RACK-MOUNTED ACCESSORIES



### MF-23

Mounting frame used for rack mounting one or two TRY-23 Trays, which in turn mount a PS-221 Power Supply. Finished in gold iridite with the following dimensions: 16 inches deep by 19 inches wide by  $8\frac{1}{8}$  inches high. The MF-23 requires an  $8\frac{3}{4}$ -inch panel space. Its shipping weight is approximately 5 pounds.



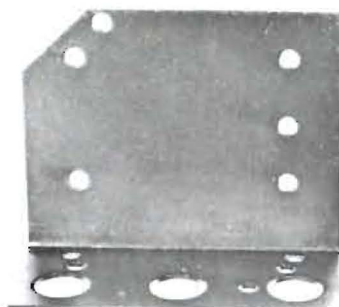
### MP-16

Rack mat panel used to cover rack-installed RC-612 rack cabinet. Finished in Langevin dark gray baked-on enamel. Size is approximately 19 inches wide by  $3\frac{1}{2}$  inches high, and weighs approximately  $\frac{3}{4}$  pound (shipping weight).



### RC-76

Rack cabinet that mounts any combination of up to four PS-222 Power Supplies. Shipped complete with four TRY-7 Trays. Finished in gold iridite and weighs approximately 10 pounds (shipping weight). Its assembled dimensions are as follows:  $12\frac{1}{2}$  inches deep by 19 inches wide by  $4\frac{7}{8}$  inches high.



### TRY-4000

Tray used to mount AM-4000-series amplifiers. Finished in gold iridite. Size is approximately  $2\frac{1}{2}$  inches deep by 1 inch wide by  $2\frac{7}{8}$  inches high, and weighs approximately 2 pounds (shipping weight).

This catalog has provided a brief look and description of products in the Langevin audio/electronic line.

Individual data sheets, which furnish technical specifications, operating characteristics and performance data for particular applications, are available.

Just tell us the sound or results you want and we will recommend the latest in equipment or accessories to take care of your specific needs.

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TWX 910-499-2669

### TERMS

Terms are cash in advance to unrated accounts unless credit has been established with the factory. Open accounts are billed 1%, 10 days, 30 days net, FOB No. Hollywood, California.

To establish credit, please send your latest audited financial statement, a bank reference, and five credit references. Rated accounts, or others who have established agreeable credit relationships, may order open account. For speedy service, new customers may accompany their order with a check. It is normal practice to ship freight charges collect for the convenience of the customer and also for the convenience of Langevin, as this simplifies billing procedures. If otherwise instructed, Langevin will ship prepaid and bill for charges. A  $1\frac{1}{2}\%$  per month service charge will be added to any balance more than 30 days past due.



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The high precision components, amplifiers, switches, power devices and related accessories have given Langevin a high-standing reputation that ranks among the leaders.

In 1971 Langevin joined with five of these leaders, Gauss, Electrodyne, Optimization, Universal Data Acquisition and Saki Magnetics, to become part of MCA TECHNOLOGY, INC. The joining of these six well-known performers will provide a synergistic research and development capability resulting in even higher quality and product improvement wherever fine control is imperative.

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